

WHAT IS CLAIMED IS:

1. A control program for a computer in a video-on-demand system, which is embodied in a program storage device that is readable by a computer and which directs said computer to perform the steps of:

5 obtain a transmission control list, from an external source, which identifies a group of several video data packets and a respective subgroup of internet protocol headers for each video data packet in said group;

10 partition into pieces, each video data packet and its respective subgroup of internet protocol headers as identified by said transmission control list; and,

send said pieces, along with an additional header for each piece, to an output port during a series
15 of spaced apart time intervals.

2. A control program according to claim 1 wherein said partition step and said send step are implemented by a single set of instructions which partition and send any selected item from said transmission control list
5 regardless of whether said selected item is one subgroup of internet protocol headers or one video data packet.

3. A control program according to claim 1 which also directs said computer to perform the step of — first select one subgroup of internet protocol headers from said transmission control list for said partition and
5 send steps, and then select the corresponding video data packet from said transmission control list for said partition and send steps, with the above steps continuing in a repetitive fashion.

4. A control program according to claim 1 wherein said obtain step includes the substeps of a) store a pair of pointers that each point to a different transmission control list, and b) alternately use one pointer of said
5 pair to select said video data packets with respective subgroups of internet protocol headers for said partition and send steps, while concurrently, requesting said external source to update the other pointer of said pair.

5. A control program according to claim 1 wherein said partition step partitions each video data packet and its respective subgroup of internet protocol headers into a single piece of a first type, multiple pieces of a
5 second type, and a single piece of a third type, where said single piece of said first type includes said respective subgroup of internet protocol headers plus an initial portion of said video data packet, each piece of said second type includes an intermediate portion of said
10 video data packet, and said single piece of said third type includes a remaining portion of said video data packet plus a trailer.

6. A control program according to claim 1 wherein said additional header is an asynchronous transfer mode header.

7. A control program according to claim 1 wherein said partition step includes the substep of determining how many bytes need to be partitioned in each video data packet and each subgroup of internet protocol headers by
5 reading, from said transmission control list, a respective count for each video data packet and each subgroup of internet protocol headers.

8. A control program according to claim 1 wherein said partition step includes the substep of determining how to access each video data packet and each subgroup of internet protocol headers by reading, from said
5 transmission control list, a respective starting address in a memory for each video data packet and each subgroup of internet protocol headers.

9. A control program according to claim 1 wherein said program storage device is an optical storage media.

10. A control program according to claim 1 wherein said program storage device is a magnetic storage media.

11. A control program according to claim 1 wherein said program storage device is an integrated circuit.